

that in certain cases this so called glassy ground mass was really analcite, which was the final product of crystallization. As has been pointed out by Prof. Iddings, the difficulty of distinguishing an isotropic substance like analcite from residual glass is at once apparent.¹ Dr. Coleman has described a dike, closely related to the tinguaite, from the north shore of Lake Superior, which is exceedingly rich in analcite.² It contains in some cases as much as 47% of this zeolite. One of the crystal tuffs from Alberta, however, will run even higher than this. Fig. I. is a photo-micrograph of a specimen in which it will be seen that the analcite will run over 60% of the rock. It is practically an analcite-tuff.

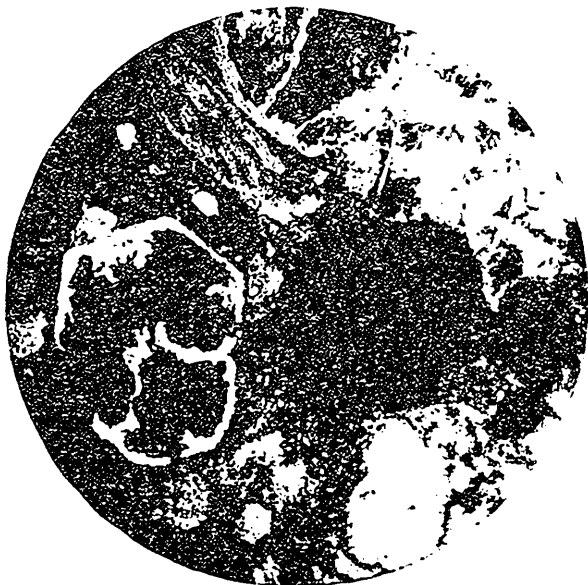


Fig. 2. Analcite replaced by calcite; crossed nicols; actual field is 2.5 mm. The large black crystal with octagonal outline, near the centre of the field, is analcite; it shows no replacement. Immediately to the left is another analcite with hexagonal outline showing replacement by calcite (white) around the edges and ramifying into the centre.

The reasons for believing that analcite is a primary mineral of these tuffs are given below. The word primary means, as already stated, that the analcite has been deposited from

1. *Jour. Geo.*, Vol. I., p. 633.

2. *Ont. Bur. of Mines* :1898, p. 172. Also *Rep for* 1899, p. 186.